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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JAMAL, ALEXANDER	

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/032,744	PALIN ET AL.	
	Examiner	Art Unit	
	Alexander Jamal	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Based upon the submitted amendment (5-18-2005), the examiner notes that claims 1-4, 6-9, 11-13, have been amended.

2. Examiner withdraws claims objections to claims 1-4, 6-9, 11-13.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-7,14-18,20** rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's specification (pages 1-4), and further in view of Marsan (6564068) and further in view of Chuah et al. (6400695).

As per **claim 1,** applicant's spec (BACKGROUND pages 1-4) discloses a wireless bluetooth system in which a second unit sends an inquiry to a first unit, and the first unit receives the message twice with a backoff time (which is, by definition, a randomly selected value within a defined number space) in between before it responds to the second device. The first device scans for inquiry messages, and scans again after a

back-off time. However, applicant's spec does not disclose the first unit measuring a received signal power level indication, and using that value to vary the range of the backoff number space.

Applicant's spec discloses that it is likely that the two devices closest to each other form the right pair of devices (Page 4 paragraph 2). Marsan discloses a wirelss networking system in which multiple devices (mobile terminals and base stations) may be configured to communicate with each other depending on signal strength (MARSAN: Col 3 line 35 to Col 4 line 30). Marsan teaches that a signal strength indication (RSSI) may be used to assign priorities to a number of possible network connections (to various base stations) when service is requested. Since the two closest networking devices would have the strongest signal level, it would have been obvious to one of ordinary skill in the art at the time of this application to use the RSSI indication to assign priorities to all possible terminal connections when attempting to connect to a network for the advantage of allowing for a higher probability of connected to the correct device (and decreasing setup time).

Chuah et al. discloses a shared access wireless networking system in which the remote units utilize a backoff delay that is dependant upon the priority of the access requests (Col 10 lines 5-35,52-67). It would have been obvious to one of ordinary skill in the art at the time of this application to use the signal strength to assign priorities (as taught by Marsan) to units attempting to connect in a Bluetooth network being used in M-commerce (as disclosed by applicant's spec) and to vary the backoff delay based upon the

priorities (and as such, the signal strength) as taught by Chuah for the advantage of reducing the setup time of the devices (CHUAH: Col 10 lines 63-67).

As per **claim 14,** claim rejected for same reasons as claim 1 rejection.

As per **claim 17,** claim rejected for same reasons as claim 14 rejection.

As per **claim 2,** Chuah discloses that the backoff delay number space is defined by a maximum and minimum number (Col 10 lines 29-35).

As per **claim 3,** Marsan discloses that the signal power is indicated by the RSSI (Col 4 lines 15-20).

As per **claims 4,6,15,18,** Marsan discloses that the hlower the RSSI is for a unit, the lower the priority is for that unit (MARSAN: Col 4 lines 5-20). Chuah discloses that the lower the priority, the higher the priority number and as such, the higher the maximum value for the number space is set (CHUAH: Col 10 lines 25-35).

As per **claim 5,** Marsan discloses that the range of RSSI values below a threshold would assign a common priority level (the lowest) (Marsan: Col 4 lines 5-15), which would be assigned a common maximum value as taught by Chuah.

As per **claim 7,** claim rejected for same reasons as claim 4,5 rejections.

As per **claims 16,20,** applicant's specification (background) discloses a Bluetooth system.

5. **Claims 8-12,19** rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's specification (pages 1-4), in view of Marsan (6564068) in view of Chuah et al. (6400695) as applied to claims 1,17.

As per **claim 8,** applicant's spec in view of Marsan in view of Chuah discloses applicant's claim 1 and the fact that RSSI measurements are made to assign a priority to possible nodes on the network. However, they do not specify that the pathloss be used in assigning the priority (and as such, the backoff delay number space).

Marsan discloses that the RSSI is used to assign priority. It would have been obvious to one of ordinary skill in the art at the time of this application that any parameter relating to the signal quality or signal strength (such as pathloss) could be used for the purpose of providing the various nodes with a ranking based upon the quality of the received signal.

As per **claim 9,11** claim rejected for same reasons as claim 4 rejection.

As per **claim 10,** claim rejected for same reasons as claim 5 rejection.

As per **claim 12,** claim rejected for same reasons as claim 9,10 rejections.

As per **claim 19,** applicant's spec in view of Marsan in view of Chuah discloses applicant's claim 17. However, they do not specify that a unit without the capability of measuring received power levels use a backoff value selected from a fixed number space.

Additionally, applicant's background discloses bluetooth devices that respond to inquiries by using a backoff value selected from a fixed number space (SPECIFICATION: page 3) in order to reduce collisions. It would have been obvious to one of ordinary skill in the art at the time of this application that any network devices without the additional capability to measure signal power would implement a backoff procedure using a fixed number space for the advantage of reducing possible collisions in the network during the inquiry process.

6. **Claim 13** rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's specification (pages 1-4), in view of Marsan (6564068) in view of Chuah et al. (6400695) as applied to claim 1, and further in view of Blatherwick et al. (6269395).

As per **claim 13,** applicant's spec in view of Marsan in view of Chuah discloses applicant's claim 1. However, they do not disclose that the second device (the one sending the inquiry) comprises a display, or that the display includes a listing of device that have responded to the inquiry message of the second device.

Blatherwick discloses a terminal device used in a network with the device comprising a display (ABSTRACT, Col 5 lines 49-65). The display may display a list of devices that have responded to inquiries (access points and services) (Col 13 lines 20-50). The services and access points may be listed in the order they were most recently accessed (Col 13 lines 53-62). It would have been obvious to one of ordinary skill in the

art at the time of this application that the devices could comprise means to display listings of access points (other network devices) to the device sending out inquiries for the purpose of enabling the user to be able to view, select and configure options pertaining to the various access points.

Response to Arguments

7. Applicant's arguments filed 5-18-2005 have been fully considered but they are not persuasive:

As per applicant's arguments that the applicant's disclosed prior art (Bluetooth specification), Marsan reference and Chuah reference would not be combined (remarks pages 14-15), examiner disagrees. All three references deal with the handshaking procedures used to connect terminals in a wireless network. Examiner contends that the different communication networks are only defined by different protocols (such as Bluetooth or cellular standards) and that those protocols tend to borrow heavily from on another. Examiner notes the concept of a randomized back-off delay that is used in both Bluetooth and cellular networks during the handshaking procedure. Additionally, the Chuah reference is directed towards access priority control in any communication system with an embodiment being implemented in a UMT system (Chuah: Col 1 lines 20-26). Chuah and Marsan teach improvements in wireless handshaking procedures.

As per applicant's argument that the Marsan reference does not deal with collisions (remarks page 15), it is not necessary for Marsan to deal with collisions

because it teaches a clear advantage of providing improved service quality in a wireless network (Marsan Col 1 lines 9-13) for the reasons specified in the claim 1 rejection.

As per applicant's argument that the Chuah reference does not disclose the same 'back-off' as the Bluetooth specification (remarks page 16, 18), the examiner disagrees, the 'back-off' in the Chuah reference is the same function as the 'back-off' of the Bluetooth specification. Again, the Chuah reference teaches an improvement to the back-off procedure of the Bluetooth specification. The known Bluetooth protocol already provides the step of scanning again after the back-off period. Additionally, examiner notes that Chuah does consider a reduction in collisions by an improved back-off step (Col 9 lines 55-67).

As per applicant's arguments that the prior art does not disclose claim 5 (remarks page 17). Examiner notes that Marsan is used to teach the concept of assigning priorities to possible network connections based upon received signal strength and Chuah teaches a further improvement of providing a back-off delay based on terminal priorities. Marsan would 'throw out' stations below a threshold, but when combined with Chuah, Chuah's system would attempt another connection (such as by retransmitting as per the UMT protocol, or scanning again as per the Bluetooth protocol) after a random backoff period. It would clearly be advantageous to do this for the reason that stations handshaking signals may have experienced intermittent interference that only temporarily affected the initial handshaking signals and caused them to be weaker. Instead of the network connections being discarded, there is an improved chance at finding a better connection between network endpoints. Additionally, examiner notes that Chuah discloses discreet

endpoint valued for the backoff delays (Chuah Col 10 lines 20-37). As such, when combined with the variable value of the RSSI measurements used to determine the priority, the endpoint values must correspond to a 'range' of RSSI values because it is not practical (nor is it disclosed or suggested by Chuah or Marsan or the Bluetooth specification) to have an infinite number of backoff delay endpoints (ie a set function of the RSSI or priority level). Examiner additionally notes that Chuah uses the phrase 'class' (Col 10 lines 30-33) to describe each set of endpoints. 'Class' used in this situation would refer to a group, or set (ie. range) of priorities based on measured signals.

As per applicant's arguments that the RSSI would not obviously be drawn to the pathloss measurement of claims 7,10,12, examiner disagrees. The received signal strength is directly dependant upon (and could be considered an indication of) the pathloss because it is directly dependant upon the pathloss. Since the system knows the initial level a signal is transmitted at, the received signal level is a direct indication of the pathloss.

As per applicant's arguments that the cited art does not disclose avoiding collisions with a smaller back-off time based on signal strength (remarks page 18), examiner notes that the Bluetooth specification in view of Marsan in view of Chuah teaches prioritizing possible network connections based upon RSSI measurements and then setting a back-off time value range based upon the priority (which is dependant upon the RSSI measurements).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9315 for After Final communications.

AJ
July 6, 2005

CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
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